

SOT-23 Plastic-Encapsulate Transistors FEATURES

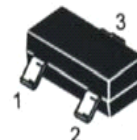
- ◆ As complementary type, the PNP transistor
MMBT3906 is Recommended
- ◆ Epitaxial planar die construction

MARKING:1AM

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
VCBO	Collector-Base Voltage	60	V
VCEO	Collector-Emitter Voltage	40	V
VEBO	Emitter-Base Voltage	6	V
Ic	Collector Current -Continuous	0.2	A
Pc	Collector Power Dissipation	0.2	W
Tj	Junction Temperature	150	°C
Tstg	Storage Temperature	-55-150	°C

SOT-23



- 1、BASE
- 2、EMITTER
- 3、COLLECTOR

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V(BR)CBO	IC=10μA,IE=0	60		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=1mA,IB=0	40		V
Emitter-base breakdown voltage	V(BR)EBO	IE=10μA,IC=0	6		V
Collector cut-off current	ICBO	VCE= 60 V , IE=0		0.1	μA
Collector cut-off current	ICEO	VCE=30V, VBE(off)=3V		50	nA
Emitter cut-off current	IEBO	VEB= 5V , IC=0		0.1	μA
DC current gain	hFE(1)	VCE=1V,IC=10mA	100	400	
	hFE(2)	VCE=1V,IC=50mA	60		
	hFE(3)	VCE=1V,IC=100mA	30		
	VCE(sat)	IC=50mA,IB=5mA		0.3	V
	VBE(sat)	IC=50mA,IB=5mA		0.95	V
Transition frequency	fT	VCE=20V,IC=10mA,f=100MHz	250		MHz
Delay time	td	VCC=3V,VBE=-0.5V,IC=10mA , IB1=-IB2= 1mA		35	nS
Rise time	tr			35	nS
Storage time	tS			200	nS
Fall time	tf			50	nS

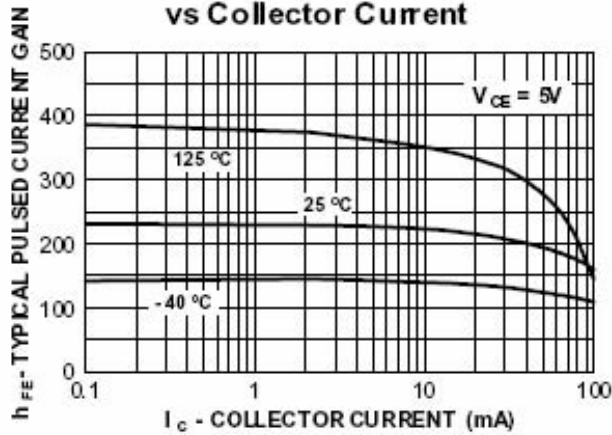
CLASSIFICATION OF hFE1

Rank	O	Y	G
Range	100-200	200-300	300-400

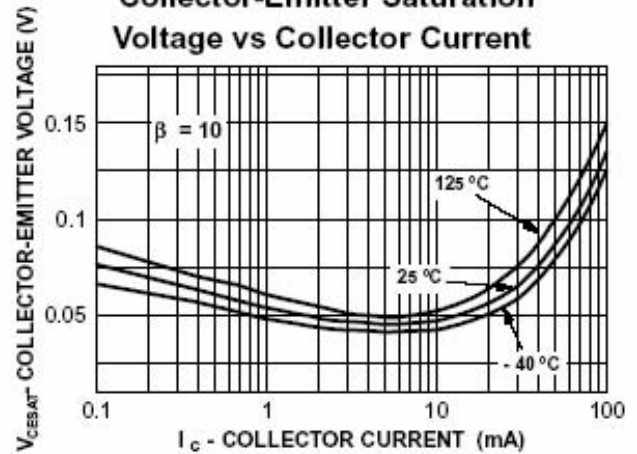
Typical Characteristics

MMBT3904

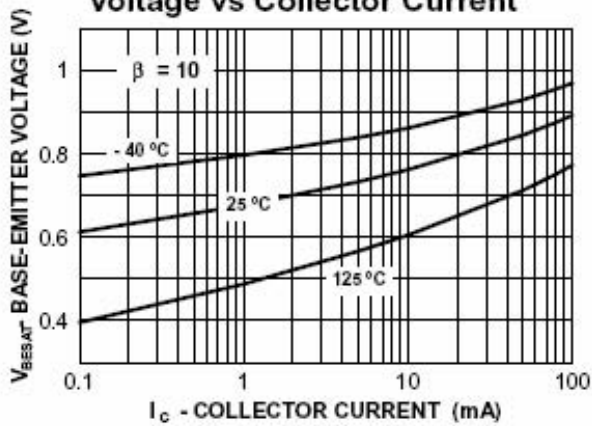
Typical Pulsed Current Gain vs Collector Current



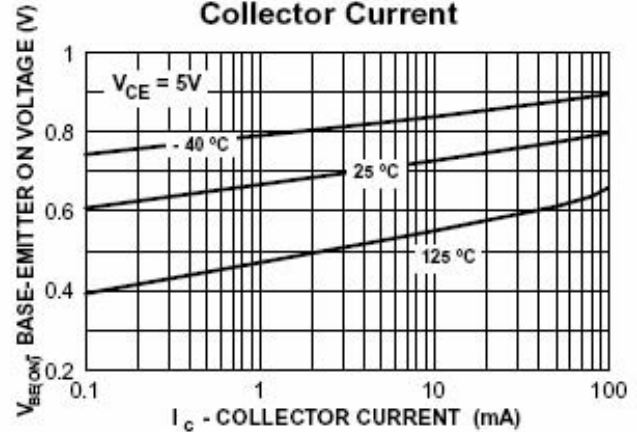
Collector-Emitter Saturation Voltage vs Collector Current



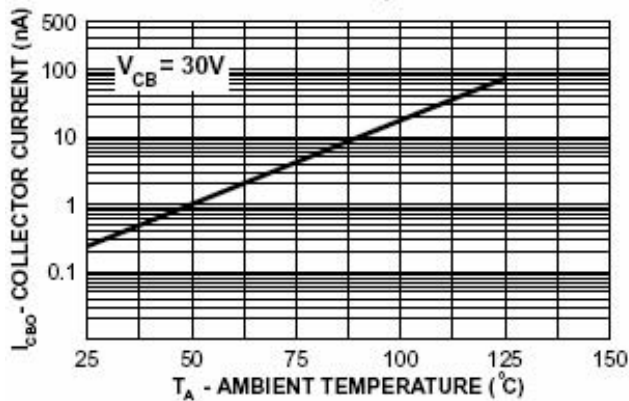
Base-Emitter Saturation Voltage vs Collector Current



Base-Emitter ON Voltage vs Collector Current



Collector-Cutoff Current vs Ambient Temperature



Capacitance vs Reverse Bias Voltage

